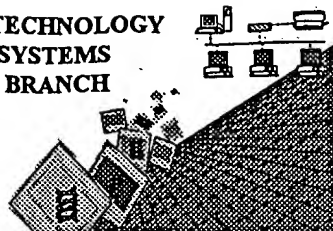


BIOTECHNOLOGY
SYSTEMS
BRANCH



#17
BC

RAW SEQUENCE LISTING
ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/937,665
Source: PCT09
Date Processed by STIC: 5/13/02

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE **CHECKER VERSION 3.1 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. Hand Carry directly to:
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7th Floor, Examiner Name, Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202
Or
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 01/29/2002

Raw Sequence Listing Error Summary

PC709

ERROR DETECTED

SUGGESTED CORRECTION

SERIAL NUMBER: 09/937,665

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1 Wrapped Nucleics
 Wrapped Aminos The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
- 2 Invalid Line Length The rules require that a line not exceed 72 characters in length. This includes white spaces.
- 3 Misaligned Amino
 Numbering The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.
- 4 Non-ASCII The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
- 5 Variable Length Sequence(s) contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
- 6 PatentIn 2.0
 "bug" A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) . Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
- 7 Skipped Sequences
 (OLD RULES) Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence:
 (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
 (i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)
 (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
 This sequence is intentionally skipped

 Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
- 8 Skipped Sequences
 (NEW RULES) Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence.
 <210> sequence id number
 <400> sequence id number
 000
- 9 Use of n's or Xaa's
 (NEW RULES) Use of n's and/or Xaa's have been detected in the Sequence Listing.
 Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.
 In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
- 10 Invalid <213>
 Response Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence
- 11 ✓ Use of <220> Sequence(s) 9-13 missing the <220> "Feature" and associated numeric identifiers and responses.
 Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.
 (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
- 12 PatentIn 2.0
 "bug" Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.
- 13 Misuse of n n can only be used to represent a single nucleotide in a nucleic acid sequence. N is not used to represent any value not specifically a nucleotide.



Does Not Comply
Corrected Diskette Needed

PCT09

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/937,665

DATE: 03/13/2002 *Errors on pp. 4+5*
TIME: 13:58:01

Input Set : A:\1825seq.txt
Output Set: N:\CRF3\03132002\I937665.raw

3 <110> APPLICANT: Toni, Kutchan
4 Anthony, Fist
5 David, Atkins
6 Meinhart, Zenk
8 CODEINONE REDUCTASE FROM ALKALOID POPPY
W--> 0 <120> TITLE INVENTION:
10 <130> FILE REFERENCE: J&J-1825
12 <140> CURRENT APPLICATION NUMBER: 09/937665
C--> 13 <141> CURRENT FILING DATE: 2002-02-20
15 <150> PRIOR APPLICATION NUMBER: PCT/AU00/00249
16 <151> PRIOR FILING DATE: 2000-03-24
18 <150> PRIOR APPLICATION NUMBER: AU PP 9463
19 <151> PRIOR FILING DATE: 1999-03-26
21 <160> NUMBER OF SEQ ID NOS: 25
23 <170> SOFTWARE: PatentIn version 3.1
25 <210> SEQ ID NO: 1
26 <211> LENGTH: 20
27 <212> TYPE: DNA
28 <213> ORGANISM: artificial sequence
30 <220> FEATURE:
31 <223> OTHER INFORMATION: PCR Primer
33 <220> FEATURE:
34 <221> NAME/KEY: misc_feature
35 <222> LOCATION: (3)..(3)
36 <223> OTHER INFORMATION: n = A or G
39 <220> FEATURE:
40 <221> NAME/KEY: misc_feature
41 <222> LOCATION: (6)..(6)
42 <223> OTHER INFORMATION: n = T or C
45 <220> FEATURE:
46 <221> NAME/KEY: misc_feature
47 <222> LOCATION: (9)..(9)
48 <223> OTHER INFORMATION: n = T or C
51 <220> FEATURE:
52 <221> NAME/KEY: misc_feature
53 <222> LOCATION: (12)..(12)
54 <223> OTHER INFORMATION: n = A or T or C
57 <220> FEATURE:
58 <221> NAME/KEY: misc_feature
59 <222> LOCATION: (15)..(15)
60 <223> OTHER INFORMATION: n = T or G
63 <220> FEATURE:
64 <221> NAME/KEY: misc_feature

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/937,665

DATE: 03/13/2002

TIME: 13:58:01

Input Set : A:\1825seq.txt

Output Set: N:\CRF3\03132002\I937665.raw

```

65 <222> LOCATION: (18)..(18)
66 <223> OTHER INFORMATION: n = T or C
69 <400> SEQUENCE: 1
W--> 70 gancnttttna tnacntcnaa 20
73 <210> SEQ ID NO: 2
74 <211> LENGTH: 26
75 <212> TYPE: DNA
76 <213> ORGANISM: artificial sequence
78 <220> FEATURE:
79 <223> OTHER INFORMATION: PCR Primer
81 <220> FEATURE:
82 <221> NAME/KEY: misc_feature
83 <222> LOCATION: (3)..(3)
84 <223> OTHER INFORMATION: n = G or A
87 <220> FEATURE:
88 <221> NAME/KEY: misc_feature
89 <222> LOCATION: (15)..(15)
90 <223> OTHER INFORMATION: n = i
93 <220> FEATURE:
94 <221> NAME/KEY: misc_feature
95 <222> LOCATION: (21)..(21)
96 <223> OTHER INFORMATION: n = i
99 <220> FEATURE:
100 <221> NAME/KEY: misc_feature
101 <222> LOCATION: (18)..(18)
102 <223> OTHER INFORMATION: n = T or A
105 <220> FEATURE:
106 <221> NAME/KEY: misc_feature
107 <222> LOCATION: (19)..(19)
108 <223> OTHER INFORMATION: n = T or G
111 <220> FEATURE:
112 <221> NAME/KEY: misc_feature
113 <222> LOCATION: (24)..(24)
114 <223> OTHER INFORMATION: n = T or C
117 <400> SEQUENCE: 2
W--> 118 gtngtctaac gtcancgnnc nccntt 26
121 <210> SEQ ID NO: 3
122 <211> LENGTH: 21
123 <212> TYPE: DNA
124 <213> ORGANISM: artificial sequence
126 <220> FEATURE:
127 <223> OTHER INFORMATION: PCR Primer
129 <220> FEATURE:
130 <221> NAME/KEY: misc_feature
131 <222> LOCATION: (3)..(3)
132 <223> OTHER INFORMATION: n = i
135 <220> FEATURE:
136 <221> NAME/KEY: misc_feature
137 <222> LOCATION: (6)..(6)

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RAW SEQUENCE LISTING

DATE: 03/13/2002

PATENT APPLICATION: US/09/937,665

TIME: 13:58:01

Input Set : A:\1825seq.txt

Output Set: N:\CRF3\03132002\I937665.raw

```

138 <223> OTHER INFORMATION: n = c or g
141 <220> FEATURE:
142 <221> NAME/KEY: misc_feature
143 <222> LOCATION: (18)..(18)
144 <223> OTHER INFORMATION: n = t or c
147 <220> FEATURE:
148 <221> NAME/KEY: misc_feature
149 <222> LOCATION: (12)..(12)
150 <223> OTHER INFORMATION: n = t or c
153 <400> SEQUENCE: 3
W--> 154 cancanttag tncacctnta c 21
157 <210> SEQ ID NO: 4
158 <211> LENGTH: 29
159 <212> TYPE: DNA
160 <213> ORGANISM: artificial sequence
162 <220> FEATURE:
163 <223> OTHER INFORMATION: PCR Primer
165 <220> FEATURE:
166 <221> NAME/KEY: misc_feature
167 <222> LOCATION: (6)..(6)
168 <223> OTHER INFORMATION: n = i
171 <220> FEATURE:
172 <221> NAME/KEY: misc_feature
173 <222> LOCATION: (9)..(9)
174 <223> OTHER INFORMATION: n = c or t
177 <220> FEATURE:
178 <221> NAME/KEY: misc_feature
179 <222> LOCATION: (12)..(12)
180 <223> OTHER INFORMATION: n = a or g
183 <220> FEATURE:
184 <221> NAME/KEY: misc_feature
185 <222> LOCATION: (18)..(18)
186 <223> OTHER INFORMATION: n = a or g
189 <220> FEATURE:
190 <221> NAME/KEY: misc_feature
191 <222> LOCATION: (22)..(22)
192 <223> OTHER INFORMATION: n = a or t
195 <220> FEATURE:
196 <221> NAME/KEY: misc_feature
197 <222> LOCATION: (23)..(23)
198 <223> OTHER INFORMATION: n = g or c
201 <220> FEATURE:
202 <221> NAME/KEY: misc_feature
203 <222> LOCATION: (3)..(3)
204 <223> OTHER INFORMATION: n = i
207 <220> FEATURE:
208 <221> NAME/KEY: misc_feature
209 <222> LOCATION: (15)..(15)
210 <223> OTHER INFORMATION: n = i

```

RAW SEQUENCE LISTING

DATE: 03/13/2002

PATENT APPLICATION: US/09/937,665

TIME: 13:58:01

Input Set : A:\1825seq.txt

Output Set: N:\CRF3\03132002\I937665.raw

213 <220> FEATURE:
214 <221> NAME/KEY: misc_feature
215 <222> LOCATION: (24)..(24)
216 <223> OTHER INFORMATION: n = i
219 <220> FEATURE:
220 <221> NAME/KEY: misc_feature
221 <222> LOCATION: (27)..(27)
222 <223> OTHER INFORMATION: n = i
225 <400> SEQUENCE: 4
W--> 226 gtngtanaanc angtnanganat gnnnccnac 29
229 <210> SEQ ID NO: 5
230 <211> LENGTH: 21
231 <212> TYPE: DNA
232 <213> ORGANISM: artificial sequence
234 <220> FEATURE:
235 <223> OTHER INFORMATION: RT-PCR Primer
237 <400> SEQUENCE: 5
238 atggagagta atggtgtacc t 21
241 <210> SEQ ID NO: 6
242 <211> LENGTH: 21
243 <212> TYPE: DNA
244 <213> ORGANISM: artificial sequence
246 <220> FEATURE:
247 <223> OTHER INFORMATION: RT-PCR Primer
249 <400> SEQUENCE: 6
250 tctaccattc actcctgaca g 21
253 <210> SEQ ID NO: 7
254 <211> LENGTH: 33
255 <212> TYPE: DNA
256 <213> ORGANISM: artificial sequence
258 <220> FEATURE:
259 <223> OTHER INFORMATION: Primer
261 <400> SEQUENCE: 7
262 atggctagca tggagagtaa tgggtgtacct atg 33
265 <210> SEQ ID NO: 8
266 <211> LENGTH: 33
267 <212> TYPE: DNA
268 <213> ORGANISM: artificial sequence
270 <220> FEATURE:
271 <223> OTHER INFORMATION: Primer
273 <400> SEQUENCE: 8
274 cttctcaaga ccctactctt cctacctagg gaa 33
277 <210> SEQ ID NO: 9
278 <211> LENGTH: 7
279 <212> TYPE: PRT
280 <213> ORGANISM: artificial sequence
282 <220> FEATURE:
283 <223> OTHER INFORMATION: peptide
285 <220> FEATURE:

invalid response; must give genetic source.
See error summary sheet, item 11

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/937,665

DATE: 03/13/2002
TIME: 13:58:01

Input Set : A:\1825seq.txt
Output Set: N:\CRF3\03132002\I937665.raw

286 <221> NAME/KEY: MISC_FEATURE
287 <222> LOCATION: (1)..(1)
288 <223> OTHER INFORMATION: x = any amino acid
291 <400> SEQUENCE: 9
W--> 293 Xaa Leu Gln Glu Leu Met Ala
294 1 5
297 <210> SEQ ID NO: 10
298 <211> LENGTH: 11
299 <212> TYPE: PRT
300 <213> ORGANISM: artificial sequence
302 <220> FEATURE:
303 <223> OTHER INFORMATION: peptide *Some error*
305 <400> SEQUENCE: 10
307 Val Leu His Gln Ile Ala Val Ala Arg Gly Lys
308 1 5 10
311 <210> SEQ ID NO: 11
312 <211> LENGTH: 10
313 <212> TYPE: PRT
314 <213> ORGANISM: artificial sequence
316 <220> FEATURE:
317 <223> OTHER INFORMATION: peptide *Some error*
319 <400> SEQUENCE: 11
321 Asp Asp Asp Glu Leu Phe Ile Thr Ser Lys
322 1 5 10
325 <210> SEQ ID NO: 12
326 <211> LENGTH: 16
327 <212> TYPE: PRT
328 <213> ORGANISM: artificial sequence
330 <220> FEATURE:
331 <223> OTHER INFORMATION: peptide *Some error*
333 <400> SEQUENCE: 12
335 Ile Pro Asp Val Val Asn Gln Val Glu Met Ser Pro Thr Leu Gly Gln
336 1 5 10 15
339 <210> SEQ ID NO: 13
340 <211> LENGTH: 7
341 <212> TYPE: PRT
342 <213> ORGANISM: artificial sequence
344 <220> FEATURE:
345 <223> OTHER INFORMATION: peptide *Some error*
347 <220> FEATURE:
348 <221> NAME/KEY: MISC_FEATURE
349 <222> LOCATION: (1)..(1)
350 <223> OTHER INFORMATION: x = any amino acid
353 <400> SEQUENCE: 13
W--> 355 Xaa Val Asn Glu Ile Pro Lys
356 1 5
359 <210> SEQ ID NO: 14
360 <211> LENGTH: 5
361 <212> TYPE: PRT

VERIFICATION SUMMARY

DATE: 03/13/2002

PATENT APPLICATION: US/09/937,665

TIME: 13:58:02

Input Set : A:\1825seq.txt

Output Set: N:\CRF3\03132002\I937665.raw

L:0 M:201 W: Mandatory field data missing, TITLE INVENTION
L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:70 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:118 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:154 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:226 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4
L:293 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9
L:355 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
L:375 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14
L:395 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15